



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/982,813	10/22/2001	Stephen N. Phillips	032732-002	8278

21839 7590 07/21/2003

BURNS DOANE SWECKER & MATHIS L L P  
POST OFFICE BOX 1404  
ALEXANDRIA, VA 22313-1404

EXAMINER

CURTIS, CRAIG

ART UNIT	PAPER NUMBER
----------	--------------

2872

DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/982,813

Applicant(s)

PHILLIPS ET AL.

Examiner

Craig H. Curtis

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 22 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 2872

## Detailed Action

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 24, 27, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. More specifically, proper antecedent support has not been provided for the following recited limitations: "...the pigment...." (claim 24, line 1); and "...the composition comprised of a pigment in particulate form dispersed in a nitrocellulose resin...." (claims 27 & 28, lines 1, 2).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-11, 14-19, 21, 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maschwitz et al. (6,007,901) in view of Lipp (3,907,727).

With regard to claim 1, Maschwitz et al. disclose (See Figs. 1 & 3) the invention as claimed--a solar-control film comprising:

Art Unit: 2872

a) an adhesive layer (40: col. 7, ll. 7-10) for adhering said solar control film to a substrate;

b) a metallized layer (20: col. 3, ll. 62-65); and

c) a scratch-resistant layer (36: col. 6, ll. 64-67), wherein said metallized layer is between said adhesive layer for adhering to a substrate and said scratch-resistant layer (see Fig. 1)--EXCEPT FOR an additional teaching wherein said scratch-resistant layer contains dispersed carbon black particles.

Lipp, however, provides an explicit teaching of preparing acrylate sheets containing dispersed carbon black particles (see col. 1, ll. 12-22), it being noted that such acrylate sheets can reasonably be viewed as satisfying Applicants' *scratch-resistant layer* recitation. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the hard coat (*read: scratch-resistant*) layer of Maschwitz et al. such that it further comprise dispersed carbon black particles, motivated by the explicit teaching by Lipp of dispersing carbon black in acrylate sheets, for at least the purpose of minimizing haze.

With regard to claims 2 & 3, it is noted that although the combination is silent with respect to the precise nature of the adhesive layer (i.e., pressure-sensitive or dry, etc.), pressure-sensitive and dry adhesives, as well as heat-sensitive and other types of adhesives, are all well-known in the art (as conceded and disclosed by Applicants on p. 9, ll. 1-3 of the Specification), and thus the use of any such art-recognized equivalent adhesive(s) would certainly have been obvious to one having ordinary skill in the art at the time the invention was made.

With regard to claim 4, the combination explicitly discloses wherein a releasable liner is present on said adhesive layer. See 42 in Fig. 1 of Maschwitz et al.; also see col. 7, ll. 10-12 therein.

Art Unit: 2872

With regard to claim 5, the combination further discloses wherein said metallized layer is comprised of aluminum (Maschwitz et al., col. 5, ll. 62-64) deposited on a polymeric substrate (viz., 34: col. 7, ll. 1-5).

With regard to claim 6, the combination further discloses wherein said polymeric substrate comprises polyethylene terephthalate (PET). *Id.*

With regard to claims 7 & 8, the combination discloses wherein said scratch-resistant layer respectively comprises from about 1 to about 10 % or from about 2 to about 3 % by weight of said carbon black particles. See Lipp: col. 2, ll. 32-37.

With regard claims 9 & 10, the combination discloses the claimed invention as set forth above EXCEPT FOR an explicit teaching wherein the carbon black particles have an average particle size in the range of from about 0.2 to about 5.0 microns or from about 0.2 to about 0.5 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have fabricated the solar control film of the combination such that its carbon black particles have an average particle size in the recited ranges, for at least the purpose of achieving a desired optical performance, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claims 14 & 15, the combination discloses the claimed invention as set forth above, including wherein said scratch-resistant layer has a thickness of about 1.5 microns (See Maschwitz et al.: col. 6, ll. 64-65) EXCEPT FOR explicit teachings wherein said scratch-resistant layer has, respectively, a thickness in the range of from about 0.5 to 3.0 microns or in the range of from about 0.8

Art Unit: 2872

to about 1.8 microns (the later range arguably being encompassed by the "...thickness of about 1.5 microns" teaching by the combination). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have fashioned said scratch-resistant layer of the solar control film of the combination such that it have a thickness in the range of about 0.5 to about 3.0 microns or in the range of from about 0.8 to about 1.8 microns--the lower limit (i.e., a thickness of about 0.5 microns) of the first range being explicitly taught by the combination and the upper limit (i.e., about 3.0 microns) being within a factor of 2 of the teaching by the combination of a thickness of same being about 1.5 microns; and the second range being, as set forth above, arguably met by the combination--for at least the purpose of providing adequate scratch resistance, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claim 16, the combination discloses wherein said solar control film has both a visible light transmittance of from about 10% to about 80% (Maschwitz et al.: col. 8, ll. 8-11) and a visible light reflection of from about 0% to about 8% (Id. @ ll. 11-16).

With regard to claim 17, the combination discloses wherein said solar control film has a haze of less than about 7%. See Lipp: col. 5, ll. 38-40; col. 6, ll. 58-59 (i.e., claim 10).

With regard to claims 18, 19, 25, and 26, the combination discloses wherein said solar control film of claim 1 further comprises a polymeric film between the adhesive layer (40) and the metallized layer (20): namely, layers 26 in Maschwitz et al.: col. 4, ll. 45-47, polyethylene ethylene terephthalate being a well-known polymeric material.

Art Unit: 2872

With regard to claim 21, the combination discloses a plurality of metallized layers. See metallic layers 16, 18, and 20 in Maschwitz et al.

With regard to claims 23 & 24, said apparatus and process claims of the combination meet the limitations recited in these claims. Please see above.

With regard to claims 27-29, said apparatus and process claims of the combination meet the limitations recited in these claims. In particular, see claim 1 of Lipp.

3. Claims 12 & 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maschwitz et al. (6,007,901) in view of Lipp (3,907,727), as applied above to claim 1, and further in view of Döhler et al. (4,978,726).

The combination discloses the claimed invention as set forth above EXCEPT FOR an explicit teaching wherein said acrylic resin is respectively prepared from a mixture of pentaerythritol triacrylate ester and pentaerythritol tetraacrylate ester or a mixture of pentaerythritol tetraacrylate ester, pentaerythritol triacrylate ester, and an acrylated epoxy compound. Döhler et al., however, disclose the preparation of acrylic resin from pentaerythritol esters--specifically pentaerythritol triacrylate and pentaerythritolmethacrylate--such esters, in addition to acrylated epoxy compounds, being well-known in the prior art. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have prepared the acrylic resin of the scratch-resistant layer of the solar control film from the above-recited mixtures, the critically of one or the other over each other not having been disclosed, for at least the purpose of achieving a desired robustness in said scratch-resistant layer.

Art Unit: 2872

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maschwitz et al. (6,007,901) in view of Lipp (3,907,727), as applied above to, inter alia, claims 1, 18, and 19, and further in view of Ojeda (6,120,901).

The combination discloses the claimed invention as set forth above EXCEPT FOR an explicit teaching wherein said polymeric film includes an ultraviolet absorbent. Ojeda, however, provides an explicit teaching wherein a polymeric film includes an ultraviolet absorbent. See, e.g., col. 1, ll. 63-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solar control film of the combination such that its polymeric film(s) include an ultraviolet absorbent, as explicitly taught by Ojeda, for at least the purpose of forestalling degradation of said solar control film over time as a result of the photooxidation of same by UV light.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maschwitz et al. (6,007,901) in view of Lipp (3,907,727), as applied above to, inter alia, claims 1, 18, and 21, and further in view of Hood et al. (5,071,206).

The combination discloses the claimed invention as set forth above EXCEPT FOR an explicit teaching wherein a polymeric film is located between adjacent metallized layers. Hood et al., however, provides an explicit teaching wherein a polymeric film (e.g., spacer layer 18 or 18' in Fig. 1) is located between adjacent metallized layers (16, 16', 16''). Also see col. 5, ll. 59-67--col. 6, ll. 1-21, esp. ll. 13-21. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the solar control film of the combination such that a polymeric film be located



Art Unit: 2872


between adjacent metallized layers, as explicitly taught by Hood et al., for at least the purposes of enhancing the durability of said solar control film over that which would obtain if said polymeric film were not located between adjacent metallized layers.

### *Contact Information*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig Curtis, whose telephone number is (703) 305-0776. The facsimile phone number for Art Unit 2872 is (703) 308-7722.

Any inquiry of a general nature regarding the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0956.

*Craig H. Curtis*  
Craig H. Curtis  
Group Art Unit 2872  
9 June 2003



Audrey Chang  
Primary Examiner  
Technology Center 2800